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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,507	04/17/2006	Ossi Kalevo	879A.0109.U1(US)	6243
29683 7590 06/11/2009 HARRINGTON & SMITH, PC 4 RESEARCH DRIVE, Suite 202 SHELTON, CT 06484-6212			EXAMINER CHU, RANDOLPH I	
			ART UNIT 2624	PAPER NUMBER
			MAIL DATE 06/11/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/576,507	Applicant(s) KALEVO ET AL.	
	Examiner RANDOLPH CHU	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/17/2006, 10/10/2006, 9/22/2008</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 1-11 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 1 recites the limitation "the output matrix" in line 4. There is insufficient antecedent basis for this limitation in the claim.
4. Claim 1 recites the limitation "the scaling ratio R" in line 8. There is insufficient antecedent basis for this limitation in the claim.
5. Claim 1 recites the limitation "the equation" in line 8. There is insufficient antecedent basis for this limitation in the claim.
6. Claim 1 recites the limitation "the ratio 1/X" in line 11. There is insufficient antecedent basis for this limitation in the claim.
7. Claim 1 recites the limitation "the ratio Y/Z" in line 13. There is insufficient antecedent basis for this limitation in the claim.
8. Claim 6 recites the limitation "the output image matrix" in line 4. There is insufficient antecedent basis for this limitation in the claim.

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9. Claim 6 recites the limitation "the intensity values" in line 6. There is insufficient antecedent basis for this limitation in the claim.

10. Claim 6 recites the limitation "the sub-groups" in line 7. There is insufficient antecedent basis for this limitation in the claim.

11. Claim 6 recites the limitation "the ratio 1/X" in line 11. There is insufficient antecedent basis for this limitation in the claim.

12. Claim 6 recites the limitation "the ratio Y/Z" in line 13. There is insufficient antecedent basis for this limitation in the claim.

13. Claim 6 recites the limitation "the scaling ratio R" in line 15. There is insufficient antecedent basis for this limitation in the claim.

14. Claim 6 recites the limitation "the equation" in line 15. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim(s) 1-6 is/are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent¹ and recent Federal Circuit decisions² indicate that a statutory "process" under 35 U.S.C. 101 must (1) be

¹ *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

² *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

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tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing.

While the instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process. For example the image processing method including step of scaling is of sufficient breadth that it would be reasonably interpreted as a series of steps completely performed mentally, verbally or without a machine.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1,2, 5, 6 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Mutoh (US 2004/0057634).

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With respect to claim 1, Mutoh teach three integers X, Y, and Z are selected in such a way that the scaling ratio R corresponds approximately to the equation $Y/(Z \cdot X)$, in which $Y < Z$ (incase of size reduction processing $ZZ < Z1$), and scaling is performed in two stages, of which in the first stage, the matrix is scaled using the ratio $1/X$ ($Z1$) (Fig. 17 ref label S72 and S73), thus creating the pixels of an intermediate matrix and, in the second stage, the each pixel of the intermediate matrix is scaled using the ratio Y/Z ($ZZ/Z1$) (Fig. 17 ref label S72 and S73) (para [0150] – [0152]).

With respect to claim 2, Mutoh teach that in the first scaling the integer X is selected to be as great as possible, according to the integers maximums selected for Y and Z and the selected total ratio R. (para. [0152]).

With respect to claim 5, Mutoh teach that the integers X, Y, and Z are set in such a way that $1/X$ is approximately Y/Z (para [0150] – [0152]).

With respect to claim 6 please refer to rejection for claim 1.

With respect to claim 7, Mutoh teach in that the apparatus is integrated in connection with the image sensor of a camera (para. [0148]).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 2 is rejected under 35 USC 103(a) as being unpatentable over Mutoh (US 2004/0057634) in view of Yamaguchi (US Patent 6,424,753)

Mutoh teaches all the limitations of claim 1 as applied above from which claim 2 respectively depend.

Mutoh does not teaches expressly that the second scaling is performed, after the first scaling, to the pixel group calculated for the intermediate matrix, without completing the calculation of the entire intermediate matrix.

Yamaguchi teaches parallel processing of scaling circuit (col. 11 lines 1-8).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to process scaling process in parallel in the method of Mutoh.

The suggestion/motivation for doing so would have been that it would speed up the processing.

Therefore, it would have been obvious to combine Yamaguchi with Mutoh to obtain the invention as specified in claim 2.

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6. Claim 4 is rejected under 35 USC 103(a) as being unpatentable over Mutoh (US 2004/0057634) in view of Kamon (US Patent 4,827,433)

Mutoh teaches all the limitations of claim 1 as applied above from which claim 4 respectively depend.

Mutoh does not teaches expressly , in the first scaling the integer X is selected to be as great as possible as the power of two.

Kamon teaches in the first scaling the integer X is selected to be as great as possible as the power of two. (col. 29 line 61- col. 30 line 7).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to process scaling process in power of two in the method of Mutoh.

The suggestion/motivation for doing so would have been that it would easier to calculate in power of two in computer calculation environment (binary).

Therefore, it would have been obvious to combine Kamon with Mutoh to obtain the invention as specified in claim 4.

7. Claim 8 is rejected under 35 USC 103(a) as being unpatentable over Mutoh (US 2004/0057634) in view of Kim (US 2002/0060676)

Mutoh teaches all the limitations of claim 6 as applied above from which claim 8 respectively depend.

Mutoh does not teaches expressly that the coarse scaler is integrated in connection with the image sensor of a camera and the fine scaler is integrated in the host system..

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Kim teaches that the scaler is integrated in connection with the image sensor of a camera and the host system. (Fig 3).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to connect scaler to sensor and host in the apparatus of Mutoh.

The suggestion/motivation for doing so would have been that it would faster scaler with scaling image right out of sensor.

Therefore, it would have been obvious to combine Kim with Mutoh to obtain the invention as specified in claim 8.

8. Claim 9 is rejected under 35 USC 103(a) as being unpatentable over Mutoh (US 2004/0057634) in view of DiNicola et al (US Patent 5,394,524).

Mutoh teaches all the limitations of claim 9 as applied above from which claim 9 respectively depend.

Mutoh does not teaches expressly that a scaler unit, in which there are separate processors (CPUs) for the coarse and fine scalers.

DiNicola et al a scaler unit, in which there are separate processors (CPUs) for the coarse and fine scalers. (col. 2 lines 13-22).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to process scaling process in separate possessor in the method of Mutoh.

The suggestion/motivation for doing so would have been that it would speed up the processing.

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Therefore, it would have been obvious to combine DiNicola et al with Mutoh to obtain the invention as specified in claim 9.

9. Claim 10 is rejected under 35 USC 103(a) as being unpatentable over Mutoh (US 2004/0057634) in view of Najand (US Patent 7,203,379).

Mutoh teaches all the limitations of claim 6 as applied above from which claim 10 respectively depend.

Mutoh does not teaches expressly the scaling function of at most 4 image-sensor lines for each colour component.

Najand teaches the scaling function of at most 4 image-sensor lines for each colour component. (col. 11 line 64-col. 12 line 11).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to scaling 4 line at a time in the appartus of Mutoh.

The suggestion/motivation for doing so would have been that it would adjust scaling filter depending on buffer size.

Therefore, it would have been obvious to combine Najand with Mutoh to obtain the invention as specified in claim 10.

10. Claim 11 is rejected under 35 USC 103(a) as being unpatentable over Mutoh (US 2004/0057634) in view of Yang et al. (US 2002/0025084).

Mutoh teaches all the limitations of claim 11 as applied above from which claim 11 respectively depend.

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Mutoh does not teach expressly the apparatus is fitted to a mobile station.

Kim teaches the apparatus is fitted to a mobile station (abstract).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to connect scaler to mobile station in the apparatus of Mutoh.

The suggestion/motivation for doing so would have been make portable image scaler.

Therefore, it would have been obvious to combine Kim with Mutoh to obtain the invention as specified in claim 11.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randolph Chu whose telephone number is 571-270-1145. The examiner can normally be reached on Monday to Thursday from 7:30 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Werner can be reached on 571-272-7401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For

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more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RIC/

/Brian P. Werner/
Supervisory Patent Examiner, Art Unit 2624